

**REMARKS****Overview**

Claims 1-4 are pending in this application. Claim 1 has been amended to place the language from the preamble into the body of the claim, and also incorporates the limitation from now cancelled claim 8. Therefore, it is proper for the Examiner to fully consider this amendment.

**Issues under 35 U.S.C. § 103**

Claims 1 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent No. 6,404,324 to Witt et al in view of the admitted prior art. Witt discloses a two-sided flat resistor and is directed towards a high power resistor. Witt discloses offsetting of substrate bending to eliminate catastrophic failure of a resistive layer. The construction of the resistor terminals in Witt, however, does not allow resistor mounting from either of two sides. As Witt does not provide this symmetry, Witt does not disclose a resistor suitable for direct loading to a pick-and-place machine or a bulk case without concern for top-bottom orientation. Witt simply does not disclose a chip resistor that is symmetrical with respect to its top-bottom orientation. For example, the termination shown in Witt has four wires for two-hole mounting connected to top and bottom resistive layers. The terminals would be inherently non-symmetric about the central longitudinal plane.

It is also important to recognize that Witt is directed towards a high-power resistor. The resistor is expected to tolerate long-time (in the range of seconds) electrical pulses (column 1, line 40). This indicated pulse duration is hundreds of times longer than characteristic time of heat propagation from one side of the substrate to another. This means that two resistive elements located on each side of the substrate will heat each other up to the same temperature

that takes place in the resistive element of a single-sided resistor with the same outline dimensions, resistance, and subjected to the same pulse load. In other words, in the case of long-time pulses, resistive layer temperature will be the same in two-sided and single-sided resistors. Thus, Witt does not disclose that the "chip resistor with both resistive layers tolerates higher instantaneous pulsed power than either layer could provide separately and individually." Therefore, this rejection should be withdrawn on that basis.

The Examiner recognizes that the terminals of Witt are not symmetrical about the central longitudinal plane (Office Action, page 3, numbered paragraph 3). Therefore, the Examiner looks to the Applicant's admitted prior art disclosed in Figure 1 to show a terminal 16 being substantially symmetrical about a central longitudinal plane. However, in Figure 1, the terminals being symmetrical does not make the resistor symmetrical. There is only one resistive layer, therefore the resistor is not symmetrical. Therefore, neither the Applicant's admitted prior art nor Witt disclose a completely symmetrical resistor, nor any motivation or suggestion to combine these references. The Examiner is merely applying improper hindsight.

The Examiner indicates that "it would have been obvious to one skilled in the art at the time the invention was made to incorporate the terminals of the APA with the device of Witt et al. since that would facilitate input/output areas." (Office Action, page 3, numbered paragraph 3). The Examiner cites to no section of Witt in support of this conclusion.

In fact, Witt discloses that the resistor of Witt is mechanically attached to a circuit board or other supporting structure using standoffs (Column 3, lines 21-25). Therefore, Witt simply does not provide any motivation or suggestion to combine because Witt is directed towards a different type of mounting. Therefore, this rejection should be withdrawn on that basis alone.

In addition, it is observed that the Examiner did not give any patentable weight to the recitation of "a pick-and-place machine" found in the preamble (Office Action, page 5, numbered paragraph 7). Therefore, claim 1 has been amended to include that same limitation in the body of the claim by adding the language of "the substrate, resistive layers, and terminals are symmetrical about the central longitudinal plane to allow for direct loading to the pick-and-place machine without concern for top-bottom orientation." Neither reference relied upon by the Examiner provides such a structure, therefore, this rejection should be withdrawn on that basis as well.

Claims 1 and 2 have also been rejected under 35 U.S.C. § 103(a) as being unpatentable over Witt et al. in view of Uehara (JP 5-90003). The Examiner has failed to make a *prima facie* case of obviousness based on this combination because the only basis the Examiner alleges for combining the references is to "facilitate input/output areas." (Office Action, page 4, numbered paragraph 4). The Examiner does not cite to anywhere in either reference that provides such a motivation or suggestion to combine. Furthermore, Witt teaches away from such motivation or suggestion to combine because Witt discusses only mechanical attachment of the resistor to a printed circuit board or other supporting structure using standoffs. (Column 3, lines 21-25).

Moreover, Witt is directed towards a high power resistor, so does not disclose or suggest the result of tolerating higher instantaneous pulsed power. Nor does the Examiner cite anywhere in Uehara that discloses that result, therefore, the Examiner has failed to make a *prima facie* case of obviousness and this rejection should be withdrawn.

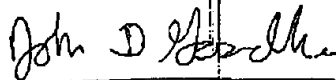
In addition, the language from the preamble has been added to the body of the claim. Thus, claim 1 includes that "the substrate, resistive layers, and terminals are symmetrical about the central longitudinal plane to allow for direct loading to the pick-and-place machine without concern for top-bottom orientation."

Therefore, it is respectfully submitted that this rejection should also be withdrawn and the Examiner should find claim 1 allowable. Claims 2-4 depend from claim 1 and the Applicant respectfully submits that the Examiner should find all claims in proper form for allowance.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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